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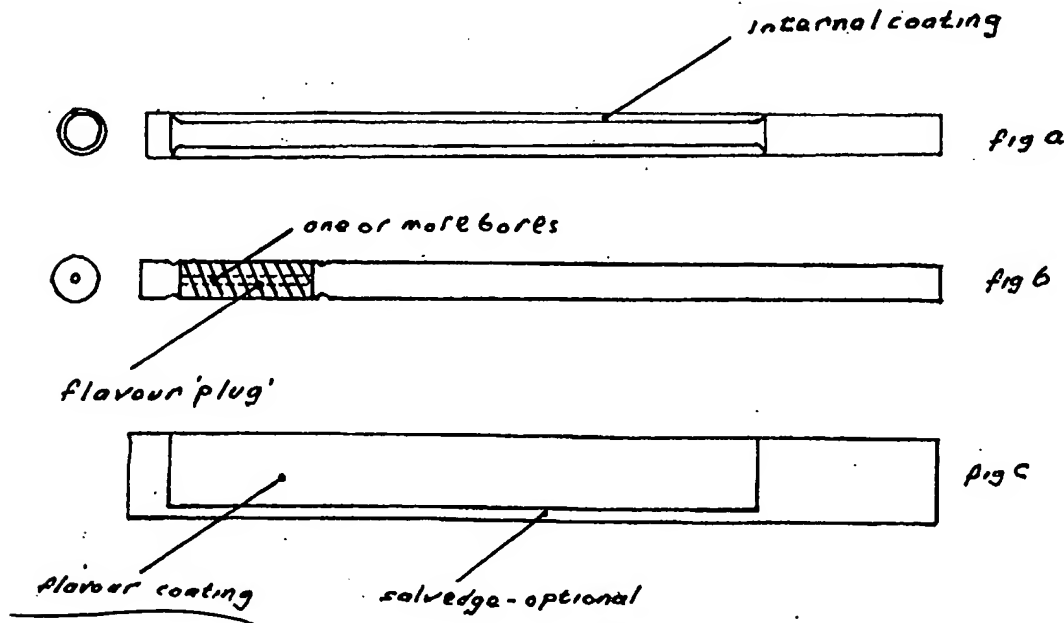
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(56) Documents Cited  
GB 2168027 A GB 0865615 A  
GB 0812661 A GB 0512831 A  
WO 99/09871 A1 US 5718681 A  
US 5094861 A US 3615595 A

(58) Field of Search  
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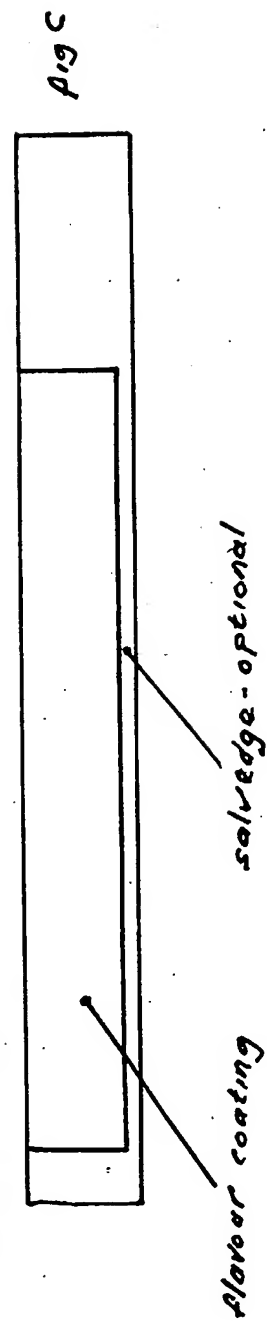
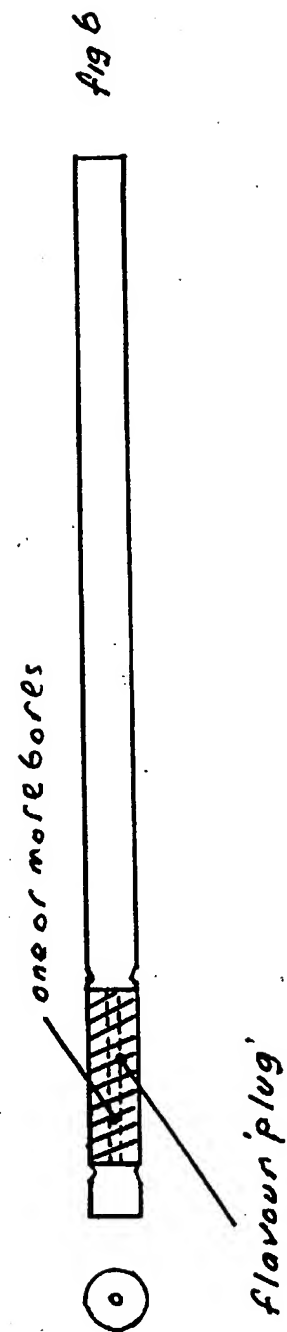
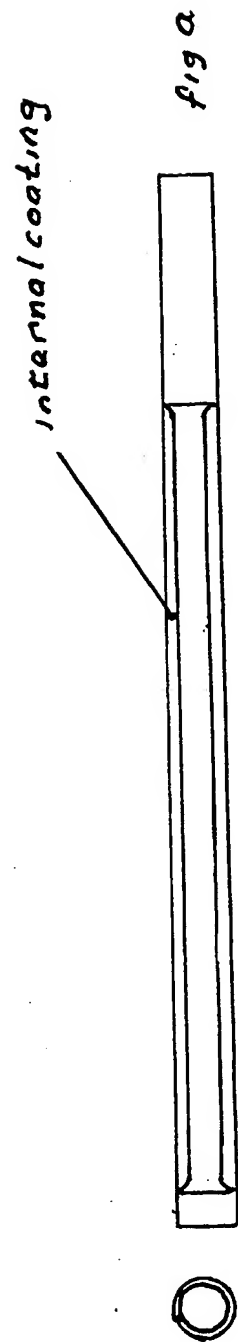
(54) Abstract Title  
Flavouring device for a liquid

(57) A flavouring device e.g. a drinking straw imparts a flavour to a liquid, such as warm or cold water, when the liquid is sucked through the device. The flavour may be chosen from a large range, including: orange, mango, pineapple, vanilla, tomato, coffee. The flavour may be incorporated into the device during manufacture and may comprise one or more layers of coating applied to a section or the whole of the internal surface of the device by injection or spray injection. Alternatively there may be a plug of flavour inserted into the device, preferably granular and/or having a bore for the liquid to pass through, or the flavouring may comprise a sleeve inserted into the device. The flavour may be of the slow-release type so that different flavours may be released when multiple coating layers are present. The device may be so shaped e.g. kinked as to help retain the flavour within the device or to aid mixing. The whole device or a part of it may dissolve in use. The device may be colour-coded or otherwise coloured to help identify the flavour(s). The device may also comprise other additives such as medicines, vitamins, fluorides, especially attractive to children.



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CROSS SECTION OF 'FLAVES'



**Flavoured Drinking Devices**

**This invention relates to a simple disposable device, which when used during the consumption of plain cold water, (or warm water if used in conjunction with beverages), will introduce a flavour to that water (or other liquid) automatically.**

The key item is the flavouring device, the plug or sleeve, which delivers the flavour, and, as such might be manufactured as a product for use with existing drinking devices (straws), or as a complete flavour pre-coated, pre-plugged or likewise flavoured drinking device. The flavour medium may be granular or solid with one or more bores allowing the passage of liquid.

Flavours, such as Lemon, Vanilla, Raspberry, Banana, Chocolate etc.  
Or a multiple of flavours which would change during consumption are incorporated into the device during manufacture and dissolve and flavour the water/liquid during use;

Methods of implementation; an internal coating, or multiple coatings of flavour material applied to a section of the straw, or 'plug' or hollow sleeve of flavour material, possibly granular in the case of plugs inserted in the straw. See drawing, figures, a and b.

Alternatively the whole, or part of the straw might be manufactured from the flavoured material itself which would naturally dissolve during use.

Further enhancements may later be introduced, e.g. vitamins, fluorides or others. In the case of children especially, the device may also be explored as a more acceptable way of presenting medicines to a patient.

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## CLAIMS

Flaves - Flavoured Drinking Device

- (1) Flaves is a flavouring device for use during the consumption of liquids, primarily plain water, cold or warm, which delivers a flavour, when water or other liquids are sucked through the device.
- (2) Flaves, as claimed in claim 1 would be capable of delivering a full range of flavours such as Orange, Lemon, Lime, Apple, Mango, Pineapple, Blackcurrent, Peach, Cherry, Vanilla, Raspberry, Banana, Grapefruit, Chocolate, Coffee, Tomato. Or a 'rainbow' selection of flavours which would change during consumption.
- (3) Flaves, as claimed in claims 1 and 2 would have flavours incorporated into the device during manufacture and which will dissolve and flavour the water or other liquids during use; by the action of sucking that liquid or water through the device.
- (4) Flaves, as claimed in claims 1, 2 and 3, methods of implementation; an internal coating, or multiple coatings of flavour materials applied to a section of the device by injection or spray injection, thereby creating an internal coating to a section or the whole internal length of the device, see drawing fig a.  
A plug of flavour, possibly granular in nature or having a bore to allow passage of water or other liquids, a sleeve of flavour, inserted into the device which dissolves during use, see drawing fig b. The whole, or part of the device manufactured from the flavoured material itself which would naturally dissolve during use. The inner face of the device pre coated with flavour material or materials before being formed into final hollow section shape, see drawing fig c.
- (5) Flaves, as claimed in claims 1, 2, 3 and 4 is and comprises the flavour material delivery device and all parts thereof and as such may be available as a complete device or part of same, plugs/sleeves, as separate items for use in conjunction with pre manufactured hollow section products.
- (6) Flaves, as claimed in claims 1, 2, 3, 4 and 5 having parts of the flavour material in some cases, comprised of a slow release type, thereby releasing flavour or, in case of multiple flavours, different flavours during useage, or laminates of flavour would be incorporated to release different flavours during usage.
- (7) The shape and configuration of Flaves as claimed in claims 1,2,3,4 and 5, will not alter the action of the flavour delivery, however alterations of benefit, either to aid mixing and or for safety purposes, for instance to avoid dislodgement of flavour plug, see retaining kink, drawing fig b, may be carried out prior to final manufacture of devices

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(8) Flaves as claimed in claims 1, claim 4 claim 5 claim 6 and claim 7 may be coloured or otherwise colour coded to identify the various flavours contained therein.

(9) Flaves as claimed in claim 1, claim 2 claim 3 claim 4 claim 5 and claim 6 are adaptable and capable of enhancements. Vitamins, fluorides and other additives of a beneficial nature may be added to or incorporated into the Flaves devices. In the case of children especially, the Flaves devices may also be explored as a more acceptable way of presenting medicines, vitamins or other beneficial additives or agents.

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Examiner: Dr Fatema Sardharwala

Claims searched: 1-9

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## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): A2B (BAAB)

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Other: Online: EPODOC, WPI, JAPIO

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2168027 A (DALGLEISH) see esp. lines 98-114 of column 2	1-5, 7, 8
A	GB 865615 (TURNER) whole document	
X	GB 812661 (FREEDMAN) see esp. lines 26-70 of page 2	1, 3, 4, 5, 7
X	GB 512831 (HATTON et al.) whole document, esp. lines 10-20 of page 1	1, 3, 4
X	WO 99/09871 A1 (SCHLEIDER) see esp. lines 12-24 of page 7; line 10 of page 9 to line 6 of page 10	1-6, 9
A	US 5718681 (MANNING) see esp. lines 28-54 of column 3	
X	US 5094861 (D'AUGUSTE et al.) see esp. lines 40-66 of column 3	1-5, 7
X	US 3615595 (GUTTAG) see esp. lines 47-66 of column 1 and line 34 of column 3 to line 15 of column 4	1-3

X Document indicating lack of novelty or inventive step

Y Document indicating lack of inventive step if combined with one or more other documents of same category.

& Member of the same patent family

A Document indicating technological background and/or state of the art  
P Document published on or after the declared priority date but before the filing date of this invention.

E Patent document published on or after, but with priority date earlier than, the filing date of this application.